

Applicant: T. Allan Hamilton  
Serial No.: 09/135,154  
Filing Date: August 17, 1998  
Docket No.: ZIL-254 (formerly CLB5-B73)

#### REMARKS

Reconsideration and allowance is respectfully requested. The listing of claims replaces all prior versions and listings of claims in the application. No claims are cancelled, added or withdrawn by this amendment.

Claim 50 stands rejected under 35 U.S.C. §103 in the Office Action dated February 10, 2004, as being "obvious" over an amazing four-way combination of: 1) Kohler (USP 5,115,236), 2) the IRDA specification, 3) Selin (EP publication 0772307), and 4) Kuhla (USP 5,973,611). The Examiner stitches different parts of these four different documents together in one particular way excluding certain other central aspects of these references from the combination, and then asserts that the resulting combination is "obvious." See the Office Action, page 2, line 11 through page 4, line 13 for further details.

Claim 50 also stands rejected under 35 U.S.C. §103 as being obvious over a combination of Nykänen (USP 5,706,110) and Kuhla (USP 5,973,611). See the Office Action, page 4, line 14 through page 5, line 15 for further details.

Applicant respectfully disagrees with the Examiner's reasoning, and traverses the §103 rejections.

It is submitted that the Examiner has let his knowledge of the teachings in Applicant's specification distort his reading of these five disparate prior art documents. The Federal Circuit has cautioned that it is difficult, but necessary, that an Examiner forget what he has been taught about the claimed invention and that the Examiner cast his mind back to the time the invention was made (often many years), to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art.<sup>1</sup> In this light, the five cited references are reviewed below for what they really would have suggested to one of ordinary skill.

Kohler, as set forth in the record, detects a "wake-up pulse" that has an

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<sup>1</sup> W.L. Gore & Assoc., Inc., v. Garlock, Inc., 220 USPQ 303 (Fed.Cir. 1983).

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especially large power level. The pulse with the large power level causes the Kohler device to detect this pulse separate and apart from other lower power signals. Despite what the Examiner maintained in an earlier Office Action, there is no suggestion in Kohler that anything other than a special power level<sup>2</sup> can be used to identify the Kohler wake-up pulse. Kohler does not even relate to IrDA. If one were for some unsuggested reason to attempt to apply Kohler to IrDA, the logical result would be a large non-IrDA compliant wake-up pulse. That is not Applicant's invention.

Selin, as set forth in the record, relates to a cell phone or some kind of communication device that cannot receive when it is in its "sleep mode." After being in its "sleep mode" for some period of time, it actually wakes up to full power mode in order to potentially detect an incident signal. If no signal is detected during its short period of full power mode operation, then the Selin device switches back to the low power sleep mode. Nowhere does Selin teach a sleep mode in which a discovery signal can be detected. Selin, in fact, if anything, would lead one of ordinary skill away from Applicant's low-power mode in which an IrDA discovery signal is received and detected. Secondly, and very importantly, Selin does not have anything to do with IrDA.

Kuhla, relates to a hands-free remote entry system for a car or other vehicle. Kuhla's system allows a user to lock/unlock doors and arm/disarm an auto theft system of a vehicle. Kuhla has nothing to do with IrDA. Despite what the Examiner says, one of ordinary skill in the IrDA arts would not be looking to the burglar alarm arts for how to improve an IrDA transceiver module. This is especially the case in view of the fact that there is no recognition in any cited reference that there is anything wrong with IrDA transceivers or any need to modify an IrDA transceiver.

In summary, it is to be kept in mind that none of Kohler, Selin and Kuhla provides any recognition that IrDA module power consumption should be

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<sup>2</sup> Due to large pulse amplitude and/or time duration.

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reduced, or could be reduced. Moreover, these references do not even have anything to do with the general topic of IrDA.

The last two references cited by the Examiner, the IrDA specification<sup>3</sup> and the Nykänen patent, do relate to IrDA. Each will be considered for what one of ordinary skill would have learned from it.

The IrDA specification sets forth a "discovery procedure." As can be seen from the IrDA specification, there is considerable detail set forth about the interchange of information back and forth between devices during the "discovery procedure." Despite all this detail, there is no recognition that there could be two different IrDA module power modes utilized during the discovery procedure.

There is no recognition or suggestion whatsoever that receipt of an IrDA discovery signal could be used to switch operation of an IrDA transceiver module from a low-power mode to a full-power mode. Quite to the contrary, the discovery "procedure" involves an interchange of information back and forth between devices. It would appear then that both the receiver and transmitter of the IrDA module of both devices would need to be operational. In this respect, the IrDA specification would, if anything, tend to lead one of ordinary skill away from Applicant's invention. If the Examiner sees any suggestion in the IrDA specification about an IrDA transceiver module operating in a low-power mode during the discovery process, then Applicant respectfully requests that the Examiner respond in the next Office Action with an indication of where that suggestion is. Applicant submits there is no such suggestion.

The only reference cited by the Examiner that relates to saving power in an IrDA device is Nykänen. To the extent that Nykänen teaches power saving in an IrDA device, and to the extent that one of ordinary skill would have followed that teaching, Applicant submits that Nykänen would have led one of ordinary skill to use a "power management block" located in the IrDA stack and therefore

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<sup>3</sup> When the Examiner states "the IrDA specification as discussed by the applicant on page 3 of the specification," it will be assumed that the Examiner is referring to the IrDA specification entitled: "Infrared Data Association Serial Infrared Link Access Protocol (IrLAP)".

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would have led one of ordinary skill away from Applicant's claimed IrDA transceiver module wherein the "IrDA discovery signal detector circuit" is part of the IrDA transceiver module.

As seen in Figure 2, Nykänen's "power management block" (PM block) is disposed in the IrDA stack of protocol processing layers. The numbers one through seven at the left of the figure designate the various layers of the stack. Nykänen's PM block may be disposed between the IrLAP and IrLMP layers as illustrated in Figure 2, or it may be part of the IrLMP layer (col. 6, line 28), or it may be implemented as a subblock of a service (col. 6, line 40). Regardless of where it is located in the stack, Nykänen's PM block wakes upper layers of the stack if the PM block detects activity on the underlying infrared link. Indeed, upon further inspection, it is realized that Nykänen nowhere describes or suggests an IrDA transceiver having two different power modes. Nykänen cannot control power consumption of the underlying IR link. Nykänen simply alerts higher layers of the IrDA stack if it detects activity on the IR link (see, for example, col. 4, lines 10-15). If the Examiner can identify any place in Nykänen that Nykänen teaches that an IrDA transceiver module can have two different power consumption modes, then the Examiner is respectfully requested to set those passages forth in the next Office Action. Applicant submits that there are no such passages in Nykänen.

Accordingly, upon consideration of each of the cited references, it is seen that not one of the five cited references anywhere either discloses or suggests that an IrDA transceiver module can or should have two different power modes. There is no suggestion in the cited documents, taken singly or in combination, of an IrDA transceiver module having a low-power mode and a full-power mode, wherein an IrDA discovery signal detection circuit of the IrDA transceiver module outputs a power-up signal upon detection of a 9600 baud IrDA discovery signal, the power-up signal causing the operation of the IrDA transceiver module to switch from the low-power mode to the full-power mode.

Applicant asks, "Where did the Examiner get the idea that power

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consumption of an IrDA transceiver module should be or could be reduced?"

That idea is not found in any cited reference. Applicant submits that the Examiner got the idea from Applicant's specification, and that Examiner then engaged in a hindsight analysis to search the prior art for pieces to recreate Applicant's invention.

Applicant respectfully requests reconsideration and allowance of Claim 50. Consideration and allowance of newly added Claims 51-57 is also respectfully requested.

#### DECLARATION OF ALAN G. GRACE

Objective evidence of non-obviousness (such as evidence of commercial success), when presented, must be considered by the Examiner in determining the issue of obviousness of claims for patentability under 35 U.S.C. §103<sup>4</sup>.

Objective evidence of non-obviousness may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was in fact not obvious.<sup>5</sup>

First, factual evidence establishing commercial success of Applicant's invention is set forth in the accompanying "Declaration of Alan G. Grace." As established in the declaration, Zilog, Inc. has sold approximately one million dollars worth of the claimed invention in each of the past five years. The declaration sets forth evidence that customers, who could have otherwise purchased less expensive IrDA modules, have specifically stated a desire to buy more expensive IrDA modules that embody the present invention because the IrDA modules have a low-power sleep mode. The low-power sleep mode is an attribute of the invention. A nexus is therefore shown between the commercial success and the claimed invention.

Second, the "Declaration of Alan G. Grace" sets forth facts that indicate that the Examiner's assertion that the invention was "obvious" is not true. If, as

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<sup>4</sup> MPEP 716.01(a).

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the Examiner has maintained, the invention was a mere "obvious" combination of prior art teachings, and if that obvious combination achieves "reduced power consumption" as the Examiner has maintained would have been evident from the prior art, and if as the Examiner maintains one of ordinary skill would have been motivated "to reduce power consumption,"<sup>6</sup> then logic would indicate that numerous companies would be producing the advantageous invention. That numerous companies would be producing the advantageous invention would appear all the more likely in view of the fact that Zilog, Inc. has been selling one million dollars worth of the invention each year for five years. The falsity of the Examiner's assertion that the invention was "obvious" is indicated by the fact that, despite the commercial incentive, there is no company other than Zilog, Inc. currently manufacturing and selling the advantageous invention. The evidence would therefore tend to indicate that Applicant's invention was, in fact, not "obvious."

Careful consideration by the Examiner of the newly presented objective evidence is respectfully requested.

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<sup>5</sup> Startoflex, Inc. v. Aeroquip Corp., 218 USPQ 871 (Fed.Cir. 1983).

<sup>6</sup> The Examiner asserts that one of ordinary skill would have been motivated to "provide improved power conservation" (Office Action, page 4, lines 1-2) and "to reduce power consumption" (Office Action, page 4, lines 11-12, and page 5, lines 13-14).

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In view of the foregoing amendments and remarks, Applicant respectfully submits that the present application (claims 50-57 are pending) is in condition for allowance. If the Examiner would like to discuss any aspect of this application, the Examiner is requested to contact the undersigned at (925) 621-2115.

I hereby certify that this is being deposited with the U.S. Postal Service as Express Mail "Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated below and is addressed to:

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Respectfully submitted,



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